

Microlens arrays

The international Genetically Engineered Machine (iGEM) competition is the largest worldwide synthetic biology competition for collegiate students. It aims to combine and create novel biological (genetic) parts, which can be incorporated in an organism, equipping it with new functions.

We, as this year's team, are going to compete against three hundred other prestigious teams worldwide with our bio-optics project. This project can be divided in two parts: the production of biological laser light and the production of biological microlenses. One promising finding is the use of micro lens arrays (MLAs). It is already proven that the use of a MLA on a solar cell as an encapsulation layer results in a 10 to almost 20% increase of the efficiency.

Within the competition there is a separated price for the best business plan. Therefore, we are currently working on a business plan for the micro lenses. The business strategy is to introduce the biological MLAs in the solar cell production market first. In order to obtain information about future possible customers and/or partners, we have developed a survey. I kindly request you to please fill out the survey or to ask a colleague to do so. This would help us a lot.

It will take less than 10 minutes to fill out the survey. Thank you for your time.

1. On a scale of 1 to 5, where 1 is not at all and 5 is high:

	1	2	3	4	5
How important is the price of the solar cells for your company?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How important is the quality of the solar cells (lifetime)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How important is the efficiency of the solar cells?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How important is the environment for your company?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How important is the overall service and information provision for your company?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How important is a fast delivery for your company?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. Have you heard from or do you have experience with micro lens arrays (MLAs) as coating for solar panels in order to increase the efficiency?

3. What is your opinion about the use of MLAs in general for the coating of solar panels?

4. Might your company be interested in the MLAs in the future?

5. If the answer to the previous question was yes, would you prefer to buy the MLAs commercially or would you prefer to get the possibility to produce it yourself?

6. Do you think that, not taking the price into account, biologically and environmentally friendly produced MLAs provide added value for you as producer or for consumers?

7. If the answer to the previous question was yes, would your company be willing to pay a higher price for the biological produced MLAs?

8. If possible to answer and if not confidential, what do you think the MLAs may cost per percentage of increase in efficiency?

9. In your opinion, what are the minimal requirements of the MLAs and our company to make the concept successful?

10. Do you think the idea and the concept has potential risks and if so, what are they?

11. Do you have any tips or advices for us that will help us with our product or business plan?